

Abstract

A code reuse apparatus in a code division multiple access wireless communication system using beamforming by an antenna array and a code reuse method therefor, wherein the method includes examining a spatial correlation between a new mobile station requesting communication and each of existing mobile stations using already allocated codes, based on long-term information reflecting spatial characteristics of beams transmitted to the new and existing mobile stations, and selecting one among the already allocated codes to reuse as a code for the new mobile station depending on the results of the correlation examination. As a result, the factual number of mobile stations for one base station may be close to the theoretic number of mobile stations corresponding to power gain by beamforming.